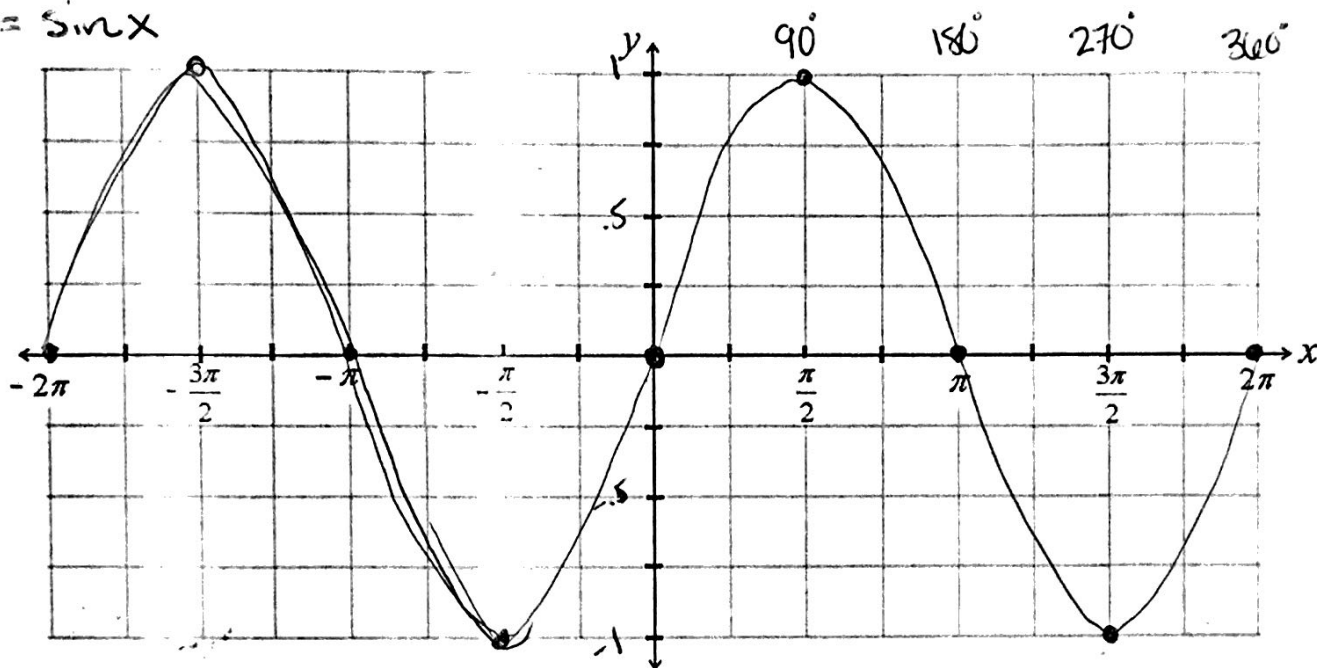


Notes - Graphing sine and cosine

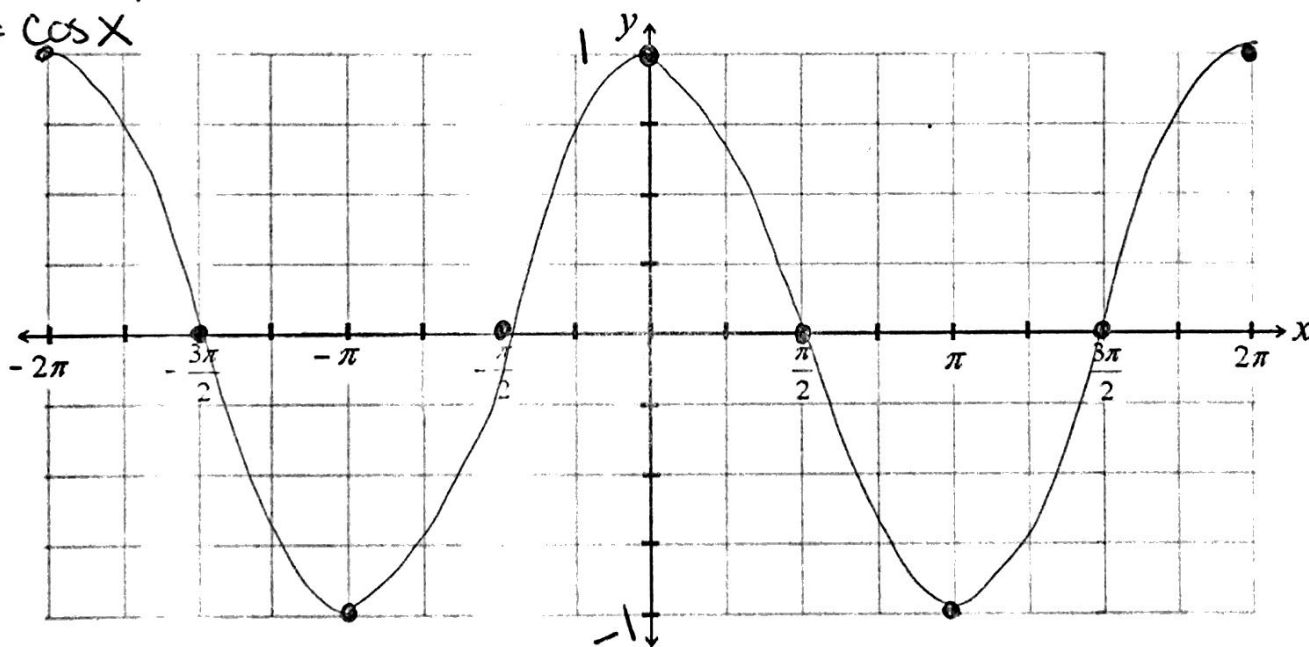
$$f(x) = \sin x$$

"y"



$$f(x) = \cos x$$

"x"



Skill Building

In Problems 9–18, if necessary, refer to a graph to answer each question.

9. What is the y-intercept of $y = \sin x$? $(0, 0)$
10. What is the y-intercept of $y = \cos x$? $(0, 1)$
11. For what numbers x , $-\pi \leq x \leq \pi$, is the graph of $y = \sin x$ increasing? $(-\pi/2, \pi/2)$ $-\pi/2 < x < \pi/2$
12. For what numbers x , $-\pi \leq x \leq \pi$, is the graph of $y = \cos x$ decreasing? $(0, \pi)$ $0 < x < \pi$
13. What is the largest value of $y = \sin x$? 1
14. What is the smallest value of $y = \cos x$? -1
15. For what numbers x , $0 \leq x \leq 2\pi$, does $\sin x = 0$? $0, \pi, 2\pi$
16. For what numbers x , $0 \leq x \leq 2\pi$, does $\cos x = 0$? $\pi/2, 3\pi/2$
17. For what numbers x , $-2\pi \leq x \leq 2\pi$, does $\sin x = 1$? Where does $\sin x = -1$? $-\pi/2, 3\pi/2$
18. For what numbers x , $-2\pi \leq x \leq 2\pi$, does $\cos x = 1$? Where does $\cos x = -1$? $-2\pi, 0, 2\pi$